

**ON-CHIP IMPEDANCE MATCHING CIRCUIT****ABSTRACT OF THE DISCLOSURE**

[68] Integrated circuits with on-chip impedance matching techniques, which greatly reduce the number of off-chip resistors that are coupled to the integrated circuit, are provided. On-chip impedance matching circuits of the present invention are associated with each of a plurality of I/O pins on an integrated circuit. Circuitry of the present invention may include a resistor divider that has a resistor and an on-chip transistor. The resistance of the on-chip transistor and a voltage output signal of the resistor divider vary with process, temperature, and voltage of the integrated circuit. The effective channel W/L ratio of the impedance matching circuit changes in response to the voltage output signal of the resistor divider, so that changes in the impedance of the impedance matching circuit caused by the variations in process, temperature, and voltage are minimized.

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